

NATIONAL INSTITUTES OF HEALTH  
FISCAL YEAR 2003  
PLAN FOR HIV-RELATED RESEARCH

IX: RACIAL AND ETHNIC  
MINORITIES

PREPARED BY THE OFFICE OF AIDS RESEARCH

**AREA OF EMPHASIS:**

## Racial and Ethnic Minorities

### SCIENTIFIC ISSUES

Significant gains have been made in the treatment of HIV infection, as well as in the elucidation of the complex mechanism involved in the pathogenesis and pathophysiology of HIV infection. Despite these gains, for over two decades, HIV infection has continued an inexorable march across racial and ethnic minority communities in the United States. The increased number of treatment options, as well as the expanding number of clinical trials, has not significantly altered the course of HIV infection or transmission in these communities. Racial and ethnic minorities continue to dominate new AIDS cases, as well as new HIV infections. Many urban centers within the United States reflect HIV seroprevalence rates among racial and ethnic minorities that mimic those in the developing world.

The interplay of cultural, economic, political, individual, and societal factors in general, especially within racial and ethnic minority communities, requires comprehensive and innovative interventions. These interventions must include greater emphasis upon the training of minority scientists, as well as a long-term commitment to the production of skilled independent investigators. The demographics of the epidemic, in stark contrast to the demographics of both extramural and intramural NIH investigators, reveal a widening divide between those infected and those conducting research upon the infected.

However, race and ethnicity alone are insufficient to bridge the gap between the scientific community and the communities most affected by HIV

infection. Within these communities, the main routes of HIV infection—unprotected sexual intercourse and substance abuse—are inextricably linked to a range of underlying community and societal factors, as well as community norms and culture. Cultural competency, or the ability to see the world through the lens of a particular culture, not just cultural awareness, is a critical skill in understanding the context of the epidemic in racial and ethnic minority communities. In addition to understanding the cultural context of HIV infection, these skills can result in designing clinical research that will produce outcomes that have relevance for these communities. Focus groups have repeatedly demonstrated that research conducted with communities, rather than “for” or “on” communities is the only research that will be acceptable.

Participation of racial and ethnic minority communities in clinical research can only serve to broaden scientific knowledge about HIV infection. This would include identifying the impact, or lack thereof, of specific racial factors upon HIV pathogenesis, transmission, susceptibility, disease progression, and disease manifestation. The high rates of other co-morbid diseases in racial and ethnic minority communities, such as hepatitis C, also provide additional opportunities to determine the effect of these disease states upon not only HIV infection, but also upon treatment options for HIV infections, or the sequelae of treatment, such as metabolic abnormalities. To achieve this objective, recruitment and retention strategies for clinical studies must be appropriate for the target population. Partnerships between NIH-funded research institutions and institutions within the community, including community-based organizations, present an opportunity for unique collaborations and greater community participation. Through these partnerships the community and NIH can benefit from an exchange of ideas from research design to dissemination of research results.

#### **OBJECTIVE:**

- **Invest and expand funding in research infrastructure at minority institutions to increase capacity to support HIV/AIDS research.**

Regardless of clinical study type or design, the infrastructure within racial and ethnic minority communities is variable and may not sustain interventions tested in a community and found to be effective. Recent revisions of the Declaration of Helsinki and National Bioethics Advisory Commission Ethical Guidelines remind us that research must leave a community “better off” than before the intervention was conducted. Research activities within racial and ethnic communities, as with any

community, must recognize the value of the individuals and their unique contribution to their community and the wider society. Interventions that are effective, but not sustainable, represent a zero sum gain for the participating communities.

Under-representation of racial and ethnic minorities in clinical research, as well as in the scientific community that conducts that research, is the product of a complex interplay of a number of factors. With these factors ranging from racism and homophobia to mistrust and ignorance, the need for a new and innovative approach for increased minority representation across both the subject and investigator populations is clear. A detailed and objective interdisciplinary review of the successes and failures of the NIH research and training programs in racial and ethnic minority communities, with action steps linked to quantifiable outcomes, is essential.

#### **OBJECTIVE:**

- **Increase the number of funded minority investigators for greater efficacy in HIV research.**

Creative strategies to increase the numbers of racial and ethnic minorities who participate in clinical research and behavioral intervention studies, without a parallel effort to increase the number of skilled, independent minority investigators, will change little in the ongoing health disparity in HIV infection. Community mistrust, only heightened by the consistent and ongoing paucity of minority investigators visible to the community, will continue to be a significant challenge. Minority investigators at all institutions face challenges; however, those at minority institutions face significant challenges, due in part to the unique missions and environments at these institutions. Ensuring adequate resources for partnership development between minority-level and established university-level and federal research institutions is key. Opportunities for faculty development, including the creation and support of partnerships between researchers at these institutions, would help foster collaboration. As minority investigators are developed and stimulated, the creation and funding of innovative pilot sabbatical and fellowship programs to ensure protected research time is necessary. Similarly, the identification and funding of senior visiting investigators for the purpose of enhancing the research capacity of minority investigators and institutions could serve as an additional catalyst at minority-predominant and minority-serving institutions. Finally, the development and funding of HIV/AIDS research networks in these same institutions may assist in the development of the critical mass needed to produce productive senior investigators.

**OBJECTIVE:**

- **Decrease health disparities among racial and ethnic minorities to increase their health status to that of the majority population with respect to HIV infection.**

In conjunction with infrastructure development, there are specific interventions necessary to expand the pool of minority investigators in HIV research. The development and expansion of short- and long-term local and national mentoring programs among racial and ethnic minorities is essential. There has been a consistent decline in the numbers of minorities selecting careers in the health sciences. To reverse such trends, there is a critical need to identify and develop strategies to recruit trainees and mentors at all levels, while providing economic and in-kind support. Innovative grant mechanisms and training workshops that support the transition from trainee to independent investigator are also needed. Enhancement and expansion of academic training programs that provide the theoretical as well as practical framework for the conduct of clinical and basic research are especially needed. As these investigators become independent and productive, there is an ongoing need for greater participation of minority investigators in the grant review process. Like the community from which it is culled, study sections in general reflect the demographics of the scientific community, and not the communities where the research they approve will be conducted. This translation gap can be diminished by greater representation of minority scientists on study sections, as well as cultural awareness training of study section members. The increasing parallels between the domestic urban HIV epidemic and the pandemic in Africa and other developing nations will require a broader knowledge of the cultural impact of interventions to control and treat HIV infection. These parallels have, and will continue, to provide research opportunities for minority investigators.

**OBJECTIVE:**

- **Include racial and ethnic minorities in prevention, therapeutic, vaccine, and clinical trials in numbers that reflect the current incidence data.**

HIV is only one of many disease states for which significant disparities exist between racial and ethnic minorities and whites. The foundation for these disparities includes, but is not limited to: poverty, racism, homophobia, social apathy, and a profound mistrust of the health care and biomedical research establishment. This mistrust is rooted in not only historical lessons, such as Tuskegee, but also in the community experience of research that has not left any sustainable interventions in place. Upon

completion of the trial or intervention, no identifiable or tangible benefit to the community has been realized. Minority communities will continue to decline research participation or cooperation until there is greater collaboration between the community and the scientific community, with attention to the sustainability of the intervention before *any* trial is begun.

Greater attention is also encouraged to the combined effects of societal factors upon the individual and community behavior with respect to HIV infection. The study of racial and ethnic differences with respect to HIV transmission, disease progression, and resistance to infection is also encouraged. The unique aspects of these communities, for example, the high rates of co-morbid disease states including diabetes, hepatitis C, sexually transmitted diseases, substance abuse and cardiovascular diseases, afford an opportunity to study interventions to reduce or eliminate the negative impact of these co-morbid diseases.

Barriers to accessing care and clinical trials are widespread within racial and ethnic minority communities. These barriers are at several levels, including individual, institutional, and community. A continued emphasis on studies that identify those factors that promote and impede early access to care, treatment, and clinical trials is important to determine effective interventions. The identification and study of these interventions to reduce or eliminate these barriers will be a fundamental step toward closing the gap between racial and ethnic minorities and whites. However, identification alone will be insufficient, hence sustaining the interventions that have proven effective will be necessary to ensure ongoing attention to these barriers.

#### **OBJECTIVE:**

- **Develop, pilot, evaluate, and sustain effective interventions to prevent HIV transmission and its co-morbidities.**

Given the barriers, mistrust, and challenges noted above, intensive efforts are justified for the recruitment and retention of racial and minority participants in clinical trials in numbers that reflect the demographics of the epidemic in real time. In order to achieve this goal, recruitment activities that are culturally appropriate for the specific target population will be necessary. Such interventions will need to include community-based education about basic and clinical research, including clinical trials. The conduct of clinical trials where individuals seek care and services will facilitate recruitment as well as retention.

Beyond recruitment and retention are the issues that unique race and/or gender characteristics may have an impact upon the outcomes in transmission, side effects, body composition changes, and treatment side effects. Racial and ethnic minorities must be recruited and retained in numbers sufficient to evaluate the presence or absence of such effects with adequate statistical power. The risks and benefits of alternative and complementary therapies used in conjunction with standard HIV therapies require further study, especially in racial and ethnic minority communities, given their place in the culture.

#### **OBJECTIVE:**

- **Promote and increase adherence to treatment regimens among racial and ethnic minorities.**

The risk behaviors for HIV transmission, and the means of preventing such transmission, have been well known for over two decades. Yet despite this, HIV infection continues to spread rapidly throughout racial and ethnic minority communities. Effective, sustainable prevention messages are desperately needed in these communities, as well as an understanding of the impact of those factors that may interfere with prevention messages.

To better understand the impact of these factors, basic behavioral research is needed to effectively target the many sub-populations within racial and ethnic minority communities, including those who use illicit substances and those with multiple diagnoses (e.g., mental disorders and alcohol/drug abuse). Reduction or elimination of language barriers that limit participation in prevention research is also needed in communities where English is not the primary language. Any standardized scales to be used in these studies should have been validated in minority populations, especially given the cultural contexts within which risk behavior occurs. The role of the family and caregivers in HIV prevention in racial and ethnic minority communities needs to be explored.

There is a need for increased awareness of NIH HIV prevention activities at the community level, which can be achieved through closer collaboration between NIH and all other Department of Health and Human Services (DHHS) agencies charged with decreasing HIV transmission through public education. Such collaborations should include, but not be limited to, information dissemination and translation of research findings. These activities also need to include technology transfer of effective prevention programs to community-based organizations that reach at-risk groups among racial and ethnic minorities.

Effective drug treatment regimens identified in the controlled environment of a clinical trial do not perform as well in urban, inner city HIV clinics. Poor adherence is the major reason for this finding and is a reflection of a host of underlying economic, individual, and social factors. There is a need for the study of multilevel interventions, including the individual, peer, family, and community levels. Further studies of the impact of noncompliance in racial and ethnic minorities upon the emergence of drug-resistant HIV, multidrug-resistant tuberculosis, and disease progression are needed.

Increased support is recommended for basic science studies of the racial and ethnic differences in body composition and pharmacokinetics, and their potential role in suboptimal drug effects. The impact of drug side effects and cosmetic changes and their role in noncompliance also warrants further study, especially in racial and ethnic minority communities, where such changes can unmask underlying HIV infection. Finally, the development of culturally appropriate and population-specific models of treatment acceptance and adherence are needed.



## SCIENTIFIC OBJECTIVES AND STRATEGIES

### OBJECTIVE:

**Invest and expand funding in research infrastructure at minority institutions to increase capacity to support HIV/AIDS research.**

### STRATEGIES:

- Ensure adequate resources for partnership development between minority institutions and established university-level and Federal research institutions.
- Ensure that information about training and recruitment opportunities is disseminated through a variety of traditional and nontraditional networks to reach the targeted population, with an ongoing evaluation of the effectiveness of these approaches.
- Ensure adequate training of minority researchers in the use of the Internet and information resources important for research.
- Ensure adequate telecommunications infrastructure at minority institutions to enable researchers to conduct their work.
- Develop and fund HIV/AIDS research networks in minority-predominant and minority-serving institutions.
- Create and fund innovative pilot sabbatical and fellowship programs to ensure protected research time.
- Identify and fund visiting senior investigators for the purpose of enhancing the research capacity of minority investigators and minority institutions.
- Create, support, and maintain equal partnerships between minority and majority researchers, as well as minority institutions.
- Emphasize long-term commitments, combining investments in research and training as in the model AIDS International Training and Research Program (AITRP). Such an approach is key to long-term sustainability and success.

<b>STRATEGIES:</b>	<p><b>OBJECTIVE:</b></p> <p><b>Increase the number of funded minority investigators, for greater efficacy in HIV research.</b></p> <ul style="list-style-type: none"> <li>• Support the development and expansion of short- and long-term local and national mentorship programs among racial and ethnic minorities.</li> <li>• Identify and develop strategies to recruit trainees and mentors at all levels, while providing economic and in-kind support, designed to enable continued participation of mentors in the mentor-trainee relationship.</li> <li>• Increase awareness, as well as review the effectiveness of existing grant mechanisms and training workshops to support the transition from trainee to independent investigator. <ul style="list-style-type: none"> <li>▸ Assure compliance, through the guidance given to study sections and yearly review of section performance, with NIH regulations for the inclusion of racial and ethnic minorities in research and training grants.</li> <li>▸ Create and implement cultural competency training for study section members, program staff, and investigators that is completed and updated on a biannual basis.</li> </ul> </li> <li>• Provide international research opportunities for minority investigators.</li> <li>• Implement academic training programs that provide theoretical and practical framework for the conduct of clinical and basic science research for minority investigators.</li> </ul>
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**OBJECTIVE:**

**Decrease health disparities among racial and ethnic minorities to increase their health status to that of the majority population with respect to HIV infection.**

**STRATEGIES:**

- Ensure that all clinical research addresses the ethical issues related to the feasibility of sustained access to therapeutic and prevention interventions after the research has concluded.
- Identify and study the effectiveness of various strategies to reduce or eliminate health disparities at the individual, institutional, and community levels.
  - ▶ Study the effectiveness of culturally appropriate interventions for primary and secondary prevention.
  - ▶ Study the factors that promote and impede early access to care, treatment, and interventions.
- Study the combined effects of several factors, including but not limited to, poverty, racism, homophobia, and homelessness in creating the health disparities observed within racial/ethnic minorities (at the individual and community levels).
  - ▶ Study the combined effects of societal factors on individual and community behavior, with respect to HIV infection.
  - ▶ Study the biology of HIV infection among racial and ethnic minorities including vulnerability to HIV and opportunistic infections, transmission, disease progression, and resistance.
- Encourage and fund basic and clinical research to understand the influence of cultural, economic, biological, behavioral, gender, and age factors upon racial and ethnic minority health disparities in HIV/AIDS.
- Study the impact of other co-morbid diseases and management of symptoms including, but not limited to, tuberculosis, hepatitis B and C, mental illness, diabetes, substance abuse, and sexually transmitted diseases on health outcomes and access to care.
  - ▶ Study interventions to reduce or eliminate the negative impact of these co-morbid diseases.

- ▶ Study the cost-effectiveness and replicability of the interventions.
- Study the differential responses to HIV and opportunistic infection (OI) therapy, including side effects among racial and ethnic minorities.

**OBJECTIVE:**

**Include racial and ethnic minorities in prevention, therapeutic, vaccine, and clinical trials in numbers that reflect the current incidence data.**

**STRATEGIES:**

- Develop and fund recruitment activities that are culturally appropriate for the specific target population.
  - ▶ Provide community-based education about basic and clinical research, including clinical trials.
  - ▶ Conduct clinical trials where individuals seek medical care and services.
  - ▶ Develop partnerships between NIH-funded research institutions and institutions in the targeted communities, including community-based organizations. Research infrastructure development within these community partners is an essential component of this partnership.
  - ▶ Include community input from the initiation of study development to the dissemination of study results.
- Increase the emphasis upon study design and methods when planning and conducting studies that will better determine the impact of racial/ethnic/gender differences upon outcomes in transmission, side effects, body composition (e.g., pathogenesis, drug treatment, and clades).
- Conduct studies of the risks and benefits of complementary and alternative therapies that may be used in conjunction with standard HIV therapies.
- Encourage the use of ClinicalTrials.gov and the AIDS Clinical Trials Information Service as tools to inform and promote an understanding of the clinical trials process and of current clinical trials in minority populations.

<b>STRATEGIES:</b>	<p><b>OBJECTIVE:</b></p> <p><b>Develop, pilot, evaluate, and sustain effective interventions to prevent HIV transmission and its co-morbidities.</b></p> <ul style="list-style-type: none"> <li>• Increase research to identify the specific mechanisms of transmission, and the critical factors that influence transmission, among racial/ethnic minorities. <ul style="list-style-type: none"> <li>▶ Identify the significant factors (e.g., stigma, poverty, racism, sexism, violence, and homophobia) that interfere with prevention messages.</li> <li>▶ Fund research conducted with the multiply diagnosed HIV/AIDS-infected population (e.g., mental disorders, alcohol/substance abuse, and medical disorders).</li> <li>▶ Develop and support innovative models to conduct outcome evaluations in racial/ethnic minority communities.</li> <li>▶ Ensure that any standardized scales to be used in studies that include racial and ethnic minorities have been validated in minority populations.</li> <li>▶ Increase community-level awareness of HIV prevention through closer collaborations between NIH and all other DHHS agencies charged with decreasing HIV transmission through public education. Such collaboration should include, but not be limited to, information dissemination and translation of research findings.</li> <li>▶ Reduce or eliminate language barriers that limit participation in prevention research in communities where English is not the primary language.</li> </ul> </li> <li>• Study the effect of nutrition and micronutrients on the impact of HIV and OI therapies and their side effects.</li> <li>• Support technology transfer of prevention programs to communities that reach at-risk groups among racial and ethnic minorities.</li> <li>• Support research on the role of family and caregivers in prevention in minority communities.</li> </ul>
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**OBJECTIVE:**

**Promote and increase adherence to treatment regimens among racial and ethnic minorities.**

**STRATEGIES:**

- Increase support for basic science studies of metabolic, body composition and pharmacokinetic racial and ethnic differences and their potential role in sub-optimal drug effects.
- Study the short- and long-term effects of noncompliance in racial and ethnic minorities, including but not limited to, the emergence of drug-resistant HIV, multidrug resistant tuberculosis, OIs, and disease progression.
- Study the effects of multilevel interventions (individual, peer, family, community) on adherence.
- Study racial and ethnic differences in adherence, and the gender-related issues and gender differences associated with chronic noncompliance.
- Study new therapeutic regimens that would facilitate adherence.
- Develop culturally appropriate and population-specific models of treatment acceptance and adherence.
- Study of the impact of minor and severe side effects on adherence (e.g., the impact of cosmetic changes associated with antiretroviral therapy).



**APPENDIX A:**

NIH Institutes and Centers



## NIH INSTITUTES AND CENTERS

<b>NCI</b>	National Cancer Institute
<b>NEI</b>	National Eye Institute
<b>NHLBI</b>	National Heart, Lung, and Blood Institute
<b>NHGRI</b>	National Human Genome Research Institute
<b>NIA</b>	National Institute on Aging
<b>NIAAA</b>	National Institute on Alcohol Abuse and Alcoholism
<b>NIAID</b>	National Institute of Allergy and Infectious Diseases
<b>NIAMS</b>	National Institute of Arthritis and Musculoskeletal and Skin Diseases
<b>NICHD</b>	National Institute of Child Health and Human Development
<b>NIDCD</b>	National Institute on Deafness and Other Communication Disorders
<b>NIDCR</b>	National Institute of Dental and Craniofacial Research
<b>NIDDK</b>	National Institute of Diabetes and Digestive and Kidney Diseases
<b>NINDS</b>	National Institute of Neurological Disorders and Stroke
<b>NIDA</b>	National Institute on Drug Abuse
<b>NIHES</b>	National Institute of Environmental Health Sciences
<b>NIGMS</b>	National Institute of General Medical Sciences
<b>NIMH</b>	National Institute of Mental Health
<b>NINR</b>	National Institute of Nursing Research
<b>NLM</b>	National Library of Medicine
<b>CC</b>	Warren Grant Magnuson Clinical Center
<b>CIT</b>	Center for Information Technology
<b>NCCAM</b>	National Center for Complementary and Alternative Medicine
<b>NCRR</b>	National Center for Research Resources
<b>FIC</b>	Fogarty International Center
<b>CSR</b>	Center for Scientific Review
<b>NCMHD</b>	National Center on Minority Health and Health Disparities
<b>NIBIB</b>	National Institute of Biomedical Imaging and Bioengineering



**APPENDIX B:**

FY 2003 OAR  
Planning Group for  
Research Related to Racial  
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**APPENDIX C:**

List of Acronyms



## LIST OF ACRONYMS

<b>ART</b>	antiretroviral therapy
<b>ACTIS</b>	AIDS Clinical Trials Information Service
<b>AIDS</b>	acquired immunodeficiency syndrome
<b>AITRP</b>	AIDS International Training and Research Program, FIC
<b>ATI</b>	Analytic Treatment Interruption
<b>ATIS</b>	HIV/AIDS Treatment Information Service
<b>AVEG/HVTN</b>	AIDS Vaccine Evaluation Group/HIV Vaccine Trials Network
<b>BSL</b>	biosafety level
<b>B/START</b>	Behavioral Science Track Award for Rapid Transition
<b>CAB</b>	community advisory board
<b>CBO</b>	community-based organizations
<b>CDC</b>	Centers for Disease Control and Prevention
<b>CFAR</b>	Centers for AIDS Research
<b>CIPRA</b>	Comprehensive International Programs in Research on AIDS
<b>CMV</b>	cytomegalovirus
<b>CNS</b>	central nervous system
<b>CSF</b>	cerebrospinal fluid
<b>CTL</b>	cytotoxic T lymphocytes
<b>DC</b>	dendritic cell
<b>DHHS</b>	Department of Health and Human Services
<b>DNA</b>	deoxyribonucleic acid
<b>DOT</b>	directly observed therapy
<b>EBV</b>	Epstein-Barr virus
<b>FDA</b>	Food and Drug Administration
<b>FIRCA</b>	Fogarty International Research Collaboration Award, FIC
<b>GCP</b>	Good Clinical Practices
<b>GCRC</b>	General Clinical Research Center
<b>GI</b>	gastrointestinal

<b>GLP/GMP</b>	good laboratory practices/good manufacturing production
<b>HAART</b>	highly active antiretroviral therapy
<b>HBCU</b>	Historically Black Colleges and Universities
<b>HBV</b>	hepatitis B virus
<b>HCFA</b>	Health Care Financing Administration
<b>HCV</b>	hepatitis C virus
<b>HERS</b>	HIV Epidemiology Research Study
<b>HHV</b>	human herpes virus
<b>HIV</b>	human immunodeficiency virus
<b>HPTN</b>	HIV Prevention Trial Network
<b>HPV</b>	human papillomavirus
<b>HRSA</b>	Health Resources and Services Administration
<b>HVTN</b>	HIV Vaccine Trials Network
<b>IC</b>	Institute and Center
<b>ICC</b>	invasive cervical cancer
<b>IDU</b>	injecting drug user
<b>IHS</b>	Indian Health Service
<b>IUD</b>	intrauterine device
<b>JCV</b>	JC virus
<b>KS</b>	Kaposi's sarcoma
<b>KSHV</b>	Kaposi's sarcoma herpes virus
<b>LRP</b>	Loan Repayment Program, NIH
<b>MAC</b>	<i>Mycobacterium avium</i> complex
<b>MCT</b>	mother-to-child transmission
<b>MDR-TB</b>	multiple drug-resistant tuberculosis
<b>MHC</b>	major histocompatibility complex
<b>MSM</b>	men who have sex with men
<b>N9</b>	nonoxynol
<b>NAFEO</b>	National Association for Equal Opportunity in Higher Education
<b>NGO</b>	nongovernment organizations

<b>NHL</b>	non-Hodgkin's lymphoma
<b>NHP</b>	non-human primate
<b>NIH</b>	National Institutes of Health
<b>NRTIs</b>	nucleoside reverse transcriptase inhibitors
<b>OAR</b>	Office of AIDS Research, NIH
<b>OARAC</b>	Office of AIDS Research Advisory Council
<b>OD</b>	Office of the Director, NIH
<b>OI</b>	opportunistic infection
<b>PHS</b>	Public Health Service
<b>PML</b>	progressive multifocal leukoencephalopathy
<b>RCMI</b>	Research Center in Minority Institution
<b>RCT</b>	randomized clinical trials
<b>RFIP</b>	Research Facilities Infrastructure Program
<b>RNA</b>	ribonucleic acid
<b>RPRC</b>	Regional Primate Research Center
<b>SAMHSA</b>	Substance Abuse and Mental Health Services Administration
<b>SCID</b>	severe combined immunodeficiency
<b>SHIV</b>	chimeric simian/human immunodeficiency virus
<b>SIT</b>	scheduled intermittent therapy
<b>SIV</b>	simian immunodeficiency virus
<b>SPF</b>	specific pathogen-free
<b>STD</b>	sexually transmitted disease
<b>STI</b>	Structured Treatment Interruption
<b>TB</b>	tuberculosis
<b>TI</b>	treatment interruption
<b>UNAIDS</b>	United Nations Joint Programme on AIDS
<b>VEE</b>	Venezuelan equine encephalitis virus
<b>VRC</b>	Vaccine Research Center
<b>WHO</b>	World Health Organization
<b>WIHS</b>	Women's Interagency HIV Study



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